Contents

World List Abbreviation: *J. Biogeogr.*

Volume 27 Number 1 January 2000

Millennium Guest Editorials

I. Simmons: Making a mark: two thousand years of ecology, economy and worldview 3

T. Webb III: Exploration of biogeographic databases: zoom lenses, space travel, and scientific interpretation 7

C. J. Humphries: Form, space and time; which comes first? 11

M. V. Lomolino: Ecology's most general, yet protean pattern: the species-area relationship 17

D. R. Foster: From bobolinks to bears: interjecting geographical history into ecological studies, environmental interpretation, and conservation planning 27

H. H. Birks and H. J. B. Birks: Future uses of pollen analysis must include plant macrofossils 31

B. A. Kennedy: Trompe L'Oeil 37

P. Holland: Cultural landscapes as biogeographical experiments: a New Zealand perspective 39

J. Kirkpatrick: The political ecology of biogeography 45

G. M. MacDonald: Preparing biogeographers for the third millennium 49

G. Prance: The failure of biogeographers to convey the conservation message 51

Fire in space and time

E. Dwyer, J. M. C. Pereira, J.-M. Gregoire and C. C. DaCamara: Characterization of the spatio-temporal patterns of global fire activity using satellite imagery for the period April 1992 to March 1993 57

K. F. Kipfmueller and W. L. Baker: A fire history of a subalpine forest in southeastern Wyoming, USA 71

A. H. Taylor: Fire regimes and forest changes in mid and upper montane forests of the southern Cascades, Lassen Volcanic National Park, California, USA 87

R. A. Minnich, M. G. Barbour, J. H. Burk and J. Sosa-Ramírez: Californian mixed-conifer forests under unmanaged fire regimes in the Sierra San Pedro Mártir, Baja California, Mexico 105

Special Paper

J. Yu and F. S. Dobson: Seven forms of rarity in mammals 131

Different aspects of biogeography

L. Blanc, G. Maury-Lechon and J.-P. Pascal: Structure, floristic composition and natural regeneration in the forests of Cat Tien National Park, Vietnam: an analysis of the successional trends 141

P. Zeilhofer and M. Schessl: Relationship between vegetation and environmental conditions in the northern Pantanal of Mato Grosso, Brazil 159

B. Channell and M. V. Lomolino: Trajectories to extinction: spatial dynamics of the contraction of geographic ranges 169

D. K. Grayson: Mammalian responses to Middle Holocene climatic change in the Great Basin of the western United States 181

Maharadatunkamsi, S. Hisheh, D. J. Kitchener and L. H. Schmitt: Genetic and morphometric diversity in Wallacea: geographical patterning in the horse shoe bat, *Rhinolophus affinis* 193

C. J. Marshall and J. K. Liebherr: Cladistic biogeography of the Mexican transition zone 203

Millennium Book Reviews

B. Michaux: *Island life* 219

P. Furley: *Plant geography upon a physiological basis* 223

Book Reviews 227

Volume 27 Number 2 March 2000

On the biogeography of trees and forests, tropical and temperate

J. R., T. Jaffré, E. Godrie, G. S. Hope and J.-M. Veillon: Structural and floristic characteristics of some monodominant and adjacent mixed rainforests in New Caledonia 233

A. C. Premoli, T. Kitzberger and T. T. Veblen: Isozyme variation and recent biogeographical history of the long-lived conifer *Fitzroya cupressoides* 251

R. T. Pennington, D. E. Prado and C. A. Pendry: Neotropical seasonally dry forests and Quaternary vegetation changes 261

M. Kessler: Altitudinal zonation of Andean cryptogam communities 275

F. Ødegaard: The relative importance of trees versus lianas as hosts for phytophagous beetles (Coleoptera) in tropical forests 283

J. E. Taylor, K. D. Hyde and E. B. G. Jones: The biogeographical distribution of microfungi associated with three palm species from tropical and temperate habitats 297

C. D. Holder: Geography of *Pinus elliottii* Engelm. and *Pinus palustris* Mill. leaf life-spans in the southeastern USA 311

D. W. Larson, U. Matthes, J. A. Gerrath, N. W. K. Larson, J. M. Gerrath, J. C. Nekola, G. L. Walker, S. Porembski and A. Charlton: Evidence for the widespread occurrence of ancient forests on cliffs 319

Aspects of vegetation change

I. Abbott, N. Marchant and R. Cranfield: Long-term change in the floristic composition and vegetation structure of Carnac Island, Western Australia 333

J. C. Duckworth, R. G. H. Bunce and A. J. C. Malloch: Modelling the potential effects of climate change on calcareous grasslands in Atlantic Europe 347

B. A. Brayshay, D. D. Gilbertson, M. Kent, K. J. Edwards, P. Wathern and R. E. Weaver: Surface pollen-vegetation relationships on the Atlantic seaboard: South Uist, Scotland 359

Animal biogeography

B. Hausdorf: Biogeography of the Limacoidea *sensu lato* (Gastropoda: Stylommatophora): vicariance events and long-distance dispersal 379

D. R. Karns, A. O'Bannon, H. K. Voris and L. A. Weigt: Biogeographical implications of mitochondrial DNA variation in the Bockadam Snake (*Cerberus rynchops*, Serpentes: Homalopsinae) in Southeast Asia 391

M. Palmer and Y. Cambefort: Evidence for reticulate palaeogeography: beetle diversity linked to connection-disjunction cycles of the Gibraltar strait 403

M. Dobson and A. Wright: Faunal relationships and zoogeographical affinities of mammals in north-west Africa 417

G. S. Cumming: Using habitat models to map diversity: pan-African species richness of ticks (Acari: Ixodida) 425

G. S. Cumming: Using between-model comparisons to fine-tune linear models of species ranges 441

R. B. Boone and W. B. Krohn: Partitioning sources of variation in vertebrate species richness 457

R. B. Boone and W. B. Krohn: Relationship between avian range limits and plant transition zones in Maine 471

F. A. Smith, M. D. Matocq, K. F. Melendez, A. M. Ditto and P. A. Kelly: How isolated are Pleistocene refugia? Results from a study on a relict woodrat population from the Mojave Desert, California 483

Book Reviews 501

Volume 27 Number 3 May 2000

Special Issue

BIOME 6000: 18,000, 6000 and 0 ^{14}C yr BP

I. C. Prentice, D. Jolly and BIOME 6000 participants: Mid-Holocene and glacial-maximum vegetation geography of the northern continents and Africa 507

M. E. Edwards, P. M. Anderson, L. B. Brubaker, T. A. Ager, A. A. Andreev, N. H. Bigelow, L. C. Cwynar, W. R. Eisner, S. P. Harrison, F.-S. Hu, D. Jolly, A. V. Lozhkin, G. M. MacDonald, C. J. Mock, J. C. Ritchie, A. V. Sher, R. W. Spear, J. W. Williams and G. Yu: Pollen-based biomes for Beringia 18,000, 6000 and 0 ^{14}C yr BP 521

R. S. Thompson and K. H. Anderson: Biomes of western North America at 18,000, 6000 and 0 ^{14}C yr BP reconstructed from pollen and packrat midden data 555

J. W. Williams, T. Webb III, P. H. Richard and P. Newby: Late Quaternary biomes of Canada and the eastern United States 585

P. E. Tarasov, V. S. Volkova, T. Webb III, J. Guiot, A. A. Andreev, L. G. Bezusko, T. V. Bezusko, G. V. Bykova, N. I. Dorofeyuk, E. V. Kvavadze, I. M. Osipova, N. K. Panova and D. V. Sevastyanov: Last glacial maximum biomes reconstructed from pollen and plant macrofossil data from northern Eurasia 609

H. Elenga, O. Peyron, R. Bonnefille, D. Jolly, R. Cheddadi, J. Guiot, V. Andrieu, S. Bottema, G. Buchet, J.-L. de Beaulieu, A. C. Hamilton, J. Maley, R. Marchant, R. Perez-Obiol, M. Reille, G. Riollet, L. Scott, H. Straka, D. Taylor, E. Van Campo, A. Vincens, F. Laarif and H. Jonson: Pollen-based biome reconstruction for southern Europe and Africa 18,000 yr BP 621

G. Yu, X. Chen, J. Ni, R. Cheddadi, J. Guiot, H. Han, S. P. Harrison, C. Huang, M. Ke, Z. Kong, S. Li, W. Li, P. Liew, G. Liu, J. Liu, Q. Liu, K.-B. Liu, I. C. Prentice, W. Qui, G. Ren, C. Song, S. Sugita, X. Sun, L. Tang, E. Van Campo, Y. Xia, Q. Xu, S. Yan, X. Yang, J. Zhao and Z. Zheng: Palaeovegetation of China: a pollen data-based synthesis for the mid-Holocene and last glacial maximum 635

H. Takahara, S. Sugita, S. P. Harrison, N. Miyoshi, Y. Morita and T. Uchiyama: Pollen-based reconstructions of Japanese biomes at 0, 6000 and 18,000 ^{14}C yr BP 665

Research Papers

North American biogeography

C. A. Hoyt: Pollen signatures of the arid to humid grasslands of North America 687

C. Bondavalli, R. E. Ulanowicz and A. Bodini: Insights into the processing of carbon in the South Florida Cypress Wetlands: a whole-ecosystem approach using network analysis 697

A. Moody: Analysis of plant species diversity with respect to island characteristics on the Channel Islands, California 711

S. Calmé and A. Desrochers: Biogeographic aspects of the distribution of bird species breeding in Québec's peatlands 725

Biogeography at various scales

W. Edwards and M. Westoby: Families with highest proportions of rare species are not consistent between floras 733

S. L. Stephenson, Y. K. Novozhilov and M. Schnittler: Distribution and ecology of myxomycetes in high-latitude regions of the Northern Hemisphere 741

M. A. Sans-Fuentes and J. Ventura: Distribution patterns of the small mammals (Insectivora and Rodentia) in a transitional zone between the Eurosiberian and the Mediterranean regions 755

H. Eva and E. F. Lambin: Fires and land-cover change in the tropics: a remote sensing analysis at the landscape scale 765

Book Reviews 777

Volume 27 Number 4 July 2000

Butterflies, beetles and birds

S. D. Kocher and E. H. Williams: The diversity and abundance of North American butterflies vary with habitat disturbance and geography 785

J. Andersen: What is the origin of the carabid beetle fauna of dry, anthropogenic habitats in western Europe? 795

D. J. Kotze, J. Niemelä and M. Nieminen: Colonization success of carabid beetles on Baltic islands 807

J. Elmberg, K. Sjöberg, H. Pöysä and P. Nummi: Abundance–distribution relationships on interacting trophic levels: the case of lake-nesting waterfowl and dytiscid water beetles 821

D. C. Franklin, J. C. Z. Woinarski and R. A. Noske: Geographical patterning of species richness among granivorous birds in Australia 829

J. C. Z. Woinarski, C. Brock, M. Armstrong, C. Hempel, D. Cheal and K. Brennan: Bird distribution in riparian vegetation in the extensive natural landscape of Australia's tropical savanna: a broad-scale survey and analysis of a distributional data base 843

S. J. Gross and T. D. Price: Determinants of the northern and southern range limits of a warbler 869

J. Pérez-Tris, R. Carbonell and J. Luis Tellería: Abundance distribution, morphological variation and juvenile condition of robins, *Erithacus rubecula* (L.), in their Mediterranean range boundary 879

A. P. Allen and R. J. O'Connor: Interactive effects of land use and other factors on regional bird distributions 889

Seals, sea and size

I. Schmelzer: Seals and seascapes: covariation in Hawaiian monk seal subpopulations and the oceanic landscape of the Hawaiian Archipelago 901

A. I. Kafanov, I. V. Volvenko, V. V. Fedorov and D. L. Pitruk: Ichthyofaunistic biogeography of the Japan (East) Sea 915

A. Choudhury and T. A. Dick: Richness and diversity of helminth communities in tropical freshwater fishes: empirical evidence 935

A. V. Milewski and R. E. Diamond: Why are very large herbivores absent from Australia? A new theory of micronutrients 957

Plant geography: from apomicts to witness trees

T. Tyler: Detecting migration routes and barriers by examining the distribution of species in an apomictic species complex 979

M. H. Hoffmann: Biogeography and climatic differentiation of two annual species of *Teesdalia* R. Br. (Brassicaceae) 989

D. B. Lindenmayer, B. G. Mackey, R. B. Cunningham, C. F. Donnelly, I. C. Mullen, M. A. McCarthy and A. M. Gill: Factors affecting the presence of the cool temperate rain forest tree myrtle beech (*Nothofagus cunninghamii*) in southern Australia: integrating climatic, terrain and disturbance predictors of distribution patterns 1001

C. H. Lusk and F. Matus: Juvenile tree growth rates and species sorting on fine-scale soil fertility gradients in a Chilean temperate rain forest 1011

A. G. Moreira: Effects of fire protection on savanna structure in Central Brazil 1021

H. S. He, D. J. Mladenoff, T. A. Sickley and G. G. Guntenspergen: GIS Interpolations of witness tree records (1839–1866) for northern Wisconsin at multiple scales 1031

Book Reviews 1043

Short Notice 1048

Volume 27 Number 5 September 2000

Special Paper 1

R. J. Whittaker, R. Field and T. Partomihardjo: How to go extinct: lessons from the lost plants of Krakatau 1049

Aspects of plant biogeography

P. Gioia and J. P. Pigott: Biodiversity assessment: a case study in predicting richness from the potential distributions of plant species in the forests of south-western Australia 1065

M. L. Cupper, A. N. Drinnan and I. Thomas: Holocene palaeoenvironments of salt lakes in the Darling Anabranch region, south-western New South Wales, Australia 1079

E. Andersson, C. Nilsson and M. E. Johansson: Plant dispersal in boreal rivers and its relation to the diversity of riparian flora 1095

H. R. Grau and T. T. Veblen: Rainfall variability, fire and vegetation dynamics in neotropical montane ecosystems in north-western Argentina 1107

M. Bürgi, E. W. B. Russell and G. Motzkin: Effects of postsettlement human activities on forest composition in the north-eastern United States: a comparative approach 1123

L. D. Gignac, L. A. Halsey and D. H. Vitt: A bioclimatic model for the distribution of *Sphagnum*-dominated peatlands in North America under present climatic conditions 1139

Special Paper 2

H. K. Voris: Maps of Pleistocene sea levels in Southeast Asia: shorelines, river systems and time durations 1153

Zoogeography: theory and practice

A. H. Harcourt: Latitude and latitudinal extent: a global analysis of the Rapoport effect in a tropical mammalian taxon: primates 1169

J. C. Briggs: Centrifugal speciation and centres or origin 1183

S. A. Trewick: Molecular evidence for dispersal rather than vicariance as the origin of flightless insect species on the Chatham Islands, New Zealand 1189

B. Ya. Vilenkin and V. I. Chikatunov: Participation of species with different zoogeographical ranks in the formation of local faunas: a case study 1201

E. Fleishman, J. P. Fay and D. D. Murphy: Upsides and downsides: contrasting topographic gradients in species richness and associated scenarios for climate change 1209

R. M. McDowall: Biogeography of the southern cool-temperate galaxioid fishes: evidence from metazoan macroparasite faunas 1221

A. M. Wieczorek, R. C. Drewes and A. Channing: Biogeography and evolutionary history of *Hyperolius* species: application of molecular phylogeny 1231

B. P. Noonan: Does the phylogeny of pelomedusoid turtles reflect vicariance due to continental drift? 1245

Book Reviews 1251

Correspondence 1256

Volume 27 Number 6 November 2000

Floras, past and present

J. S. Beard, A. R. Chapman and P. Gioia: Species richness and endemism in the Western Australian flora 1257

M. Horrocks, Y. Deng, J. Ogden and D. G. Sutton: A reconstruction of the history of a Holocene sand dune on Great Barrier Island, northern New Zealand, using pollen and phytolith analyses 1269

P. Convey, R. I. Lewis Smith, D. A. Hodgson and H. J. Peat: The flora of the South Sandwich Islands, with particular reference to the influence of geothermal heating 1279

G. Williams-Linera, M. S. Devall and C. Alvarez-Aquino: A relict population of *Fagus grandifolia* var. *mexicana* at the Acatlan Volcano, Mexico: structure, litterfall, phenology and dendroecology 1297

A. Krings: A phytogeographical characterization of the vine flora of the Sonoran and Chihuahuan deserts 1311

Faunas, past and present

T. D. O'Hara and G. C. B. Poore: Patterns of distribution for southern Australian marine echinoderms and decapods 1321

J. P. Carney and T. A. Dick: The historical ecology of yellow perch (*Perca flavescens* [Mitchill]) and their parasites 1337

S. A. Elias, D. Berman and A. Alfimov: Late Pleistocene beetle faunas of Beringia: where east met west 1349

R. L. H. Dennis, T. G. Shreeve, A. Olivier and J. G. Coutsis: Contemporary geography dominates butterfly diversity gradients within the Aegean archipelago (Lepidoptera: Papilionoidea, Hesperioidea) 1365

B. J. van Rensburg, S. L. Chown, A. S. van Jaarsveld and M. A. McGeoch: Spatial variation and biogeography of sand forest avian assemblages in South Africa 1385

M. Oliverio, M. A. Bologna and P. Mariottini: Molecular biogeography of the Mediterranean lizards *Podarcis* Wagler, 1830 and *Teira* Gray, 1838 (Reptilia, Lacertidae) 1403

M. J. Lawes and H. A. C. Eeley: Are local patterns of anthropoid primate diversity related to patterns of diversity at a larger scale? 1421

C. Badgley and D. L. Fox: Ecological biogeography of North American mammals: species density and ecological structure in relation to environmental gradients 1437

Book Reviews 1469

Author Index 1473